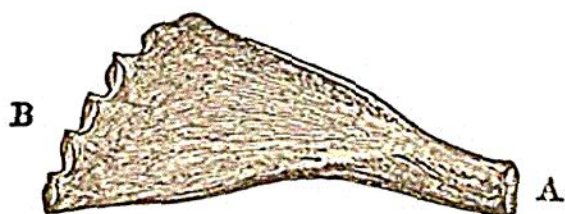


Fig. 42.



ISCHIUM OF ASTEROLEPIS.

(One half nat. size, linear.)

os ischium or hip-bone, the homologues of the metatarsal and oc-bones are attached, to the exclusion of the bones of the thigh and leg. In the Abdominales, — fishes such as the salmon and carp, — that have the ventrals placed behind the abdomen, in the position analogous to that in which the hinder legs of the reptiles and mammals occur, the ischiatic bones generally exist as flat triangular plates, with their heads either turned *inwards* and downwards, as in the herring, or *outwards* and downwards, as in the pike; whereas in some of the cartilaginous fishes, such as the Rays and Sharks, they exist as an undivided cartilaginous band, stretched transversely from ventral to ventral. And such, with but an upward direction, appears to have been their position in the *Asterolepis*. They seem to have united at the narrow neck A, over the middle of the lower portion of the abdomen; and to the notches of the flat expansion B, — notches which exactly resemble those of the immensely developed carpal bones of the Ray, — five metatarsal bones were attached, from which the fin expanded. It is interesting to find the number in this ancient representative of the vertebrata restricted to five, — a number greatly exceeded in most of the existing fishes, but which is the true normal number of the vertebrate sub-kingdom as shown in all the higher examples, such as man, the *quadrumina*, and in most of the *carnaria*. The form of this